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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/666,194	09/21/2000	Jeffrey A. Korn	1008-0100	9104
25263 7590 10/09/2003				
J GRANT HOUSTON AXSUN TECHNOLOGIES INC 1 FORTUNE DRIVE BILLERICA, MA 01821			EXAMINER PETKOVSEK, DANIEL J	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 10/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/666,194

Applicant(s)

KORN, JEFFREY A.

Examiner

Daniel J Petkovsek

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133)
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 8/28/2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 and 27-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-25 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-10, 12, 15-19, 27-35, 37, 38, and 41-47 is/are rejected.
- 7) ☒ Claim(s) 7, 11, 13, 14, 20, 36, 39, and 40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/21/2000 and 11/13/2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5/3, 2/1
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-102)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This office action is in response to the election, without traverse of group I, claims 1-25, and 27-47, received August 28, 2003.

#### ***Information Disclosure Statement***

1. The prior art documents submitted by Applicant in the Information Disclosure Statements filed on May 6, 2003, have been considered and made of record (note attached copy of forms PTO-1449).
2. The prior art document in the Information Disclosure Statements filed on February 15, 2001, has not been considered, since it is a foreign reference, and was not included in the file history. The document not considered is WO 99/63373.

#### ***Drawings***

3. New corrected drawings are required in this application because the drawings are informal, having hand-drawn reference numbers and figures. Some of the drawings also have incorrect sizings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

#### ***Claim Objections***

4. Claims 15, 29, and 42 are objected to because of the following informalities: in claim 15, the word "a" should be in front of "camera that detects...". In claim 29, the word "signal" should follow "detecting the optical...". In claim 42, "the camera" should be replaced by "a camera", since no previous mention of a camera has been made. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 4, 9, 12, 15, 16-18, 37, 38, and 41-47 are rejected under 35

U.S.C. 102(e) as being anticipated by Korevaar U.S.P. No. 6,498,668.

Korevaar U.S.P. No. 6,498,668 teaches (ABS, Fig. 6, column 6, lines 42-65) an optical alignment apparatus and process for a fiber optic system having at least one lens (56,60) and a tunable filter 58 in which a back-reflection from any optical train element is detected by a camera 72, and the positions of the lenses, filter, etc. are manipulated in response to the back reflection (see column 7, lines 38-45). Regarding claim 4, see mirror 66. Regarding claims 9 and 42, an optical image is formed for detection by camera. Regarding claims 18 and 43, the signal is tuned by adjuster 82.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 2, 3, 5, 6, 8, 10, 19, and 27-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korevaar U.S.P. No. 6,498,668.

Korevaar U.S.P. No. 6,498,668 teaches (ABS, Fig. 6, column 6, lines 42-65) an optical alignment apparatus and process for a fiber optic system having at least one lens (56,60) and a tunable filter 58 in which a back-reflection from any optical train element is detected by a camera 72, and the positions of the lenses, filter, etc. are manipulated in response to the back reflection (see column 7, lines 38-45). Korevaar '668 does not explicitly teach some of the dependent limitations as claimed.

Regarding claims 2, 3, 5, 6, 10, and 19, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to use fiber pigtails optically coupled to the alignment system of Korevaar '668, since coupling to these devices improves upon optical performance once the apparatus is properly aligned. Regarding claim 8 and 34, filters are well known in the art to be wavelength selective in certain ranges, and using a coating for the filter is well known in the art to create predetermined wavelength ranges. Regarding claims 27-33 and 35, although not explicitly disclosed as MEMS tunable filtering devices, it would have been obvious to use MEMS devices for improved filtering purposes of the incoming optical signal. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use MEMS device to decrease size and improve optical filtering performance.

***Allowable Subject Matter***

9. Claims 21-25 are allowed. The relevant prior art of record does not teach or reasonably disclose that an image is generated from both lenses, and each image created causes an adjustment of each respective lens to improve optical alignment.
10. Claims 7, 11, 13, 14, 20, 36, 39, and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The relevant prior art does not teach or reasonably suggest these specific limitations of the claimed subject matter. Regarding claim 7, the removal of the mirror is not disclosed. Regarding claims 11, 20, and 36, the detection of a ratio is not disclosed. Regarding claims 13 and 40, frequency not coinciding with a resonant peak is not disclosed. Regarding claims 14 and 39, a reflective member insertable is not disclosed.

#### *Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, with respect to the state of the art of optical alignment using filters and lenses:

U.S.P. No. 6,611,642 to O'Neill et al. (see ABS, column 1, lines 30-40)

U.S.P. No. 6,370,299 to Green et al. (see ABS, Fig. 1, claim 1, column 2, lines 1-22)

PTO-892 form references D-I.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J Petkovsek whose telephone number is (703) 305-6919. The examiner can normally be reached on M-F 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (703) 308-4819. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 872-9321.



Daniel Petkovsek  
September 24, 2003

